	Application No.	Applicant(s)
Notice of Allowability	09/865,459	LEE ET AL.
	Examiner	Art Unit	
	Jerome Grant II	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to _____.

2. ☒ The allowed claim(s) is/are *1-18, 41 and 42 (rewritten as ~~old claim 43~~).* *(handwritten: claims 1-20)*

3. ☒ The drawings filed on *29 May 2001* are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☒ All   b) ☐ Some*   c) ☐ None   of the:

      1. ☒ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

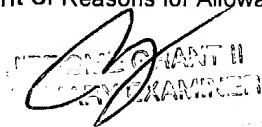   * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of

    Paper No./Mail Date _____ .

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

09/865,454

Examiner's Amendment

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

In the claims:

1. (Currently Amended) A color quantization method based on the HMMD color space, comprising:

dividing the color space into a plurality of differential values <u>corresponding to diff</u> [(diff)] regions along the diff axis; uniformly quantizing each diff regions along <u>a</u> [the]sum axis and <u>a</u> [the] hue axis.

14. (Currently Amended) A color quantization method based on the HMMD color space, comprising:

dividing the color space into a plurality of differential values <u>corresponding to</u> diff regions along [the] <u>a</u> diff axis.

42. Cancelled)

43 (New Claim)   A method of describing a color image using HMMD color space, comprising:

describing a color image using one of 256, 128, 64 and 32 bins by: quantizing the HMMD color space into at most five subspaces using the diff axis of the HMMD color space, wherein the diff axis intervals are defined by points: (0,6), (6,20), (20,60), (60, 110) and (110,255); and uniformly quantizing each subspace along the hue and the sum axis of the HMMD color space as follows:

within bin 256, at subspace 0,   the hue value is 1 and the sum is 32; at subspace 1, the hue value is 4 and the sum is 8; at subspaces 2-4, the   hue value is 16 and the sum is 4;

within bin 128, at subspace 0, the hue values is 1 and the sum is 16; at subspace 1, the hue value is 4 and the sum is 4; at subspaces 2-4, the hue value is 8 and the sum is 4;

within bin 64, at subspace 0, the hue value is 1 and the sum is 8; at subspaces 1 and 2, the hue value is 4 and the sum is 4; at subspace 3, the hue value is 8 and the sum is 2; at subspace 4, the hue value is 8 and the sum is 1;

within bin 32, at subspace 0, the hue is 1 and the sum is 8, at subspace 1, the hue and sum value is 0; at subspace 2, the hue and sum value is 4; at subspaces 3 and 4, the hue values are 4 and the sum value is 1 respectively.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerome Grant II whose telephone number is 703-305-4391. The examiner can normally be reached on Mon.-Fri. from 9:00 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly Williams, can be reached on703-305-4863. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jerøme Grant II

Reasons for Allowance

Claims 1 and 3-13 are allowed for the reason the prior art does not teach or suggest in claimed combination, "... uniformly quantizing each diff regions along a sum axis and a hue axis."

Claim 2 is allowed for the reason the prior art does not teach or suggest, "... dividing a lowest diff region of the color space into N equal parts along the sum axis; and dividing the rest of the diff regions along the sum axis and the hue axis."

Claims 14-18 are allowed for the reason the prior art does not teach or suggest, dividing each of the diff regions into 2 (Exp.) X equal parts into 2 (Exp.) Y equal parts along a hue axis, wherein X and Y are integers.

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J. Grant II